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**Fort McPherson Rapid Health Impact Assessment:
Zoning for Health Benefit to Surrounding Communities during Interim Use**

June, 2010

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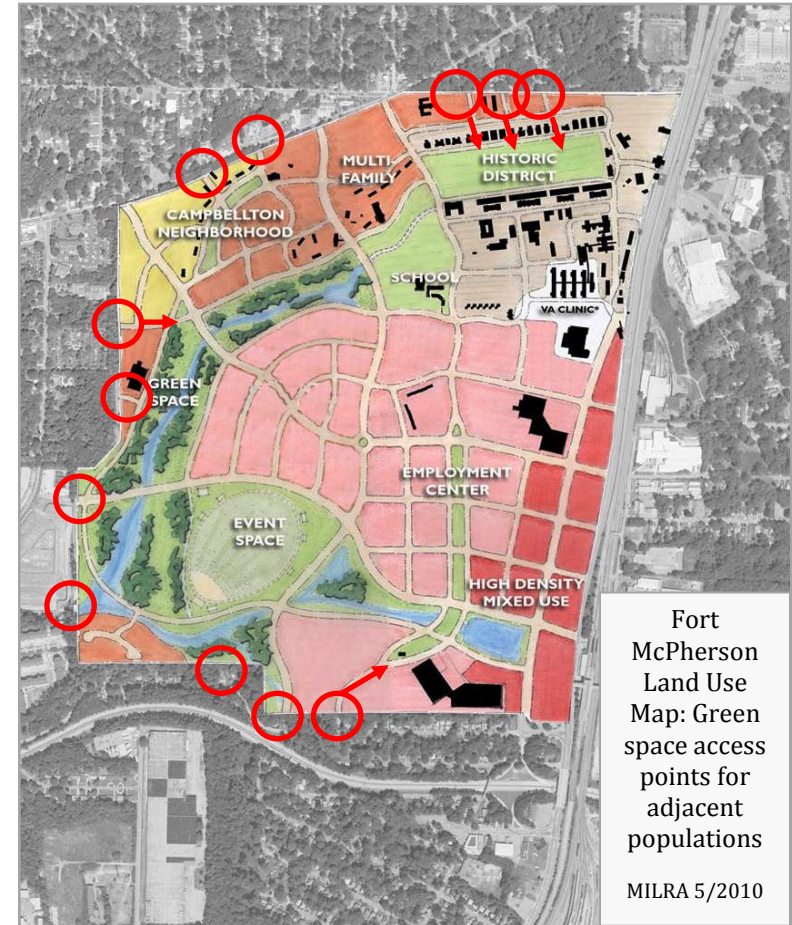
EXECUTIVE SUMMARY

Input to the HIA Scoping Process

- The Georgia Tech/Stand-Up studio report
- A list of interest areas and recommendations submitted by McPherson Action Community Coalition (MACC)
- Field/Observation notes taken by our team at the City of Atlanta Planning Department's community zoning meetings
- Photos and notes from a neighborhood windshield tour
- Meetings with City Planners and LRA

SCOPE

What are the differential health effects of zoning provisions on the adjacent populations' healthy nutrition, physical activity, alcohol and tobacco use, and social cohesion during the phase-in period?



The scope of this HIA was limited to zoning provisions in the areas of:

- Permitted uses
- Green space
- Transportation

...that can influence the following determinants of health:

- Nutrition
- Physical activity
- Alcohol consumption
- Tobacco use
- Social connections

...which can impact the following health outcomes of the community:

- Cardiovascular disease
- Diabetes
- Obesity
- Mental health
- Cancer

Findings*	Zoning Recommendations	Nutrition	Phys Activity	Alcohol Use	Tobacco Use	Social Connection
In the first 5-10 years, people in surrounding areas will be the ones most affected by changes on the base.	1) Include a statement of overall intent to maximize benefits and minimize or mitigate harms to the health of surrounding populations, to the extent feasible.	✓	✓	✓	✓	✓
Community gardens encourage people to eat more healthy foods and try new fruits and vegetables. They boost community bonds and individual sense of well-being; and they increase nearby home values. But ¼ mile is the furthest most people will walk for fresh food.	2) Permit community gardens in green space and areas within ¼ mile of schools, senior housing, MARTA stations, and adjacent neighborhoods to the north, west and south. 3) Permit small-scale (e.g., 1 acre tracts) farming in the same areas as the community gardens	✓	✓			✓
People eat healthy, fresh foods more when they have good access to farmer's markets. Farmer's markets can create jobs, improve the local economy, provide the best selection of in-season foods, increase food safety, and reduce fuel and pollution effects of transport.	4) Permit farm stands and farmer's markets in green space and other areas within ¼ mile of MARTA stations and adjacent neighborhoods to the north, west and south, including the Historic District.	✓				✓
Social connections contribute to health and well-being. Isolation increases stress, weakens immune systems and increases depression.	5) Permit use of selected, accessible existing buildings for community meetings, education and children's programs.					✓
People are more physically active when they have access to trails and parks. They are more likely to use trails when they can access them from multiple places. Walking trails may especially increase physical activity for groups that are most likely not to exercise – women and people of limited income.	6) Permit use of existing outdoor recreational facilities and green space until redeveloped; maximize accessibility with ADA-compliant roads or paths at multiple border entry points (see map on previous page).	✓				✓
Fast food contributes to obesity of children and adults because of high calories, large, inexpensive portions, and frequent consumption.	7) Limit fast food restaurants and prohibit their development near areas in which children congregate.		✓			
Secondhand smoke contributes to cardiovascular disease, lung cancer, respiratory disease, disability and premature death.	8) Prohibit bars and restaurants that do not support the state tobacco policy. Designate public spaces where children congregate as smoke-free.			✓		
Tobacco advertising accounts for 1/3 of smoking experimentation in youth. Children are twice as susceptible to tobacco advertising as adults. It influences them more than peer pressure.	9) Enforce federal policy (effective 6/20/2010) prohibiting outdoor cigarette or smokeless tobacco advertising within 1,000 feet of schools, parks or playgrounds 10) Limit outdoor and store-front advertising.			✓	✓	
People who are exposed to more alcohol advertisements consume more alcohol. Neighborhoods with more alcohol billboards also often have more liquor stores. Alcohol ads are often densely located near schools and places where youth congregate.						
Alcohol-related health problems such as cirrhosis, car crashes and violence are related to availability of alcohol.	11) Reduce alcohol availability by restricting the density of establishments that serve or sell alcoholic beverages.			✓		

* Additional evidence, citations, and information on the strength of the evidence for each finding are available in the following report.

INTRODUCTION

Fort McPherson is an Army installation in Atlanta, Georgia that is slated to close in 2011 as part of the Department of Defense's Base Realignment and Closure (BRAC) program. Conversion of the 488-acre base from military to civilian domain represents a significant redevelopment opportunity that could have profound economic and health implications for new residents, neighboring communities, and the region.

Base closure is a complex and highly prescribed process. Redevelopment may span decades. The interim use of the property during the first 5-10 years after closure could have a crucial impact on the health of neighboring communities.

As part of a project to bring a Health in all Policies (HiAP) perspective into the BRAC process for Fort McPherson, the Georgia Health Policy Center (GHPC) conducted a Health Impact Assessment (HIA) of the proposed rezoning plan. This report describes the evidence-centered, participatory methodology employed and the conclusions and recommendations that resulted from the HIA.

PROJECT BACKGROUND

The Fort McPherson Army base lies roughly midway between downtown Atlanta and Hartsfield Jackson International Airport. Transit stations serve the northeastern and southeastern corners of the property. Existing structures on the site include a variety of housing, a bank, library, convenience store, gas station, recreational facilities, health services facilities, office space and more. The parade ground and surrounding buildings date from the late 19th century and are on the National Historic Register. Over 200 acres of the property are dedicated to recreational space, primarily a golf course.

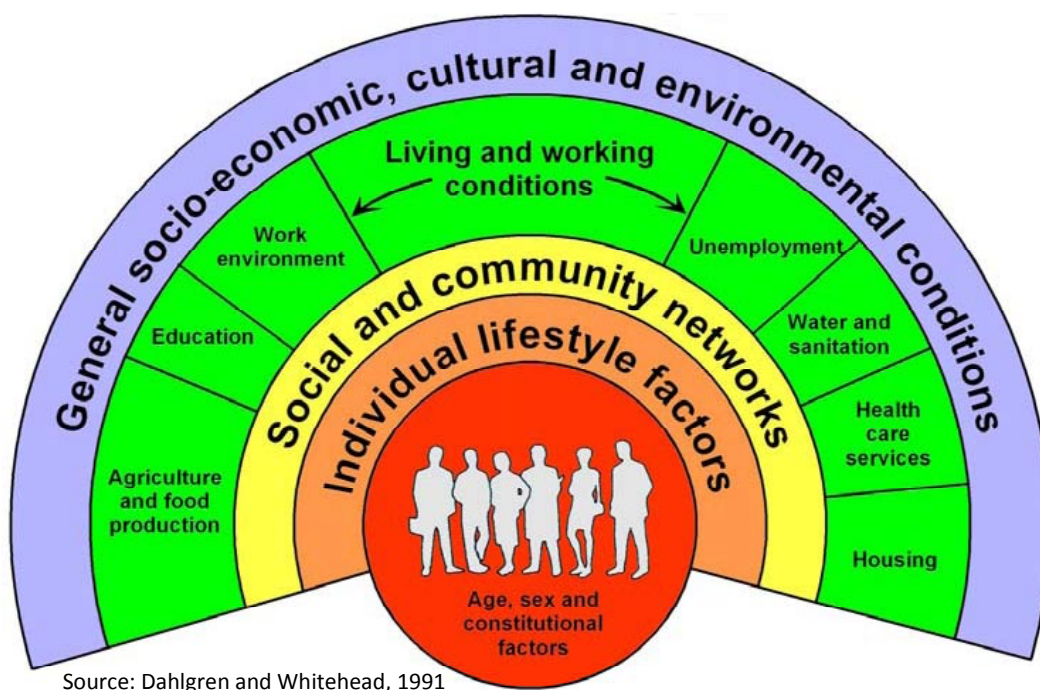
Although data on the current health status of communities surrounding Fort McPherson were not available, we do know that the health status of Fulton County residents (which encompasses much of Atlanta) is fair to poor. For example, one out of every four adults in Fulton County is likely to be obese¹. Statistics are almost the same for children in Georgia. We know that children who are obese are more likely to be obese adults and obesity in children may pave the road for adult diseases. Being obese increases a person's risk for heart disease, diabetes, cancer, high blood pressure, high cholesterol, stroke, liver and gallbladder disease, respiratory problems, and arthritis. The annual cost of obesity in Georgia is estimated at \$2.4 billion (\$250 per Georgian each year), which includes direct health care costs and lost productivity from disease, disability, and death.

Genetics alone cannot explain the increase in obesity rates in recent decades. Consuming too many calories and not doing enough physical activity are the main causes of the rise in obesity rates. Improving access to healthy, low calorie foods and safe places to exercise, and also limiting access to high calorie, low nutrient foods, are all crucial elements in promoting healthy weight. Maintaining a healthy weight, along with reducing alcohol consumption and eliminating tobacco use, are three of the core components to healthy living.

¹ Defined as having a Body Mass Index (BMI) over 30

A Health in All Policies approach to issues such as obesity and alcohol and tobacco use is one in which policy-making in sectors traditionally distinct from the “health sector” – transportation, urban planning, agriculture and others – take into account the potential ramifications of the policy for the short- and long-term health of affected populations. A growing body of evidence is illuminating health implications not previously considered that, when taken into account, can be leveraged to reduce harm or to foster the conditions in which people can and will likely to thrive. The socio-environmental model of health in Figure 1 shows how the health status of a population is affected by socioeconomic, environmental, and cultural conditions. The design of a built environment can influence these conditions, as well as living, working, and social network conditions, to influence health outcomes.

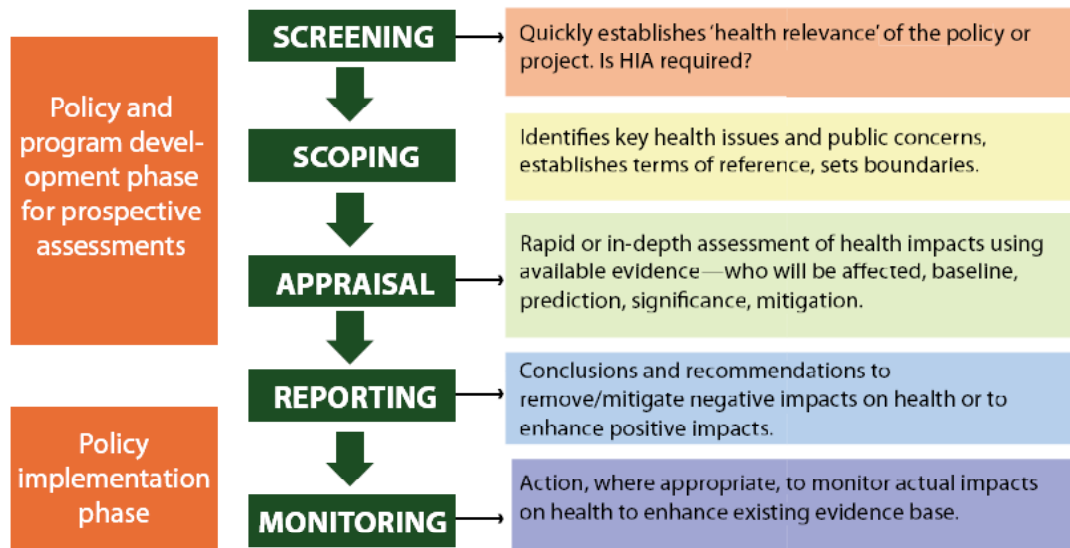
Figure 1. A socio-environmental model of health



HEALTH IMPACT ASSESSMENT

This report details a rapid health impact assessment (HIA) conducted by GHPC as a supporting activity in the Fort McPherson Health in all Policies project. Health Impact Assessment is defined by the World Health Organization (WHO) as “a combination of procedures, methods and tools by which a policy, program or project may be judged as to its potential effects on the health of a population, and the distribution of those effects within the population.” It is an established, systematic method for engaging stakeholders and bringing their interests and concerns, together with scientific evidence, into decision-making processes in order to optimize health impacts. Though relatively new to the US, HIA has been used widely in other parts of the world for more than 20 years. Figure 2 outlines the HIA process as delineated by WHO.

Figure 2. Health Impact Assessment Procedure



Source: Adapted from WHO, *Health Impact Assessment Tools and Methods*

HIAs vary in depth and complexity according to the scope of the proposal under consideration, the needs of the HIA sponsor, and resources available to conduct the HIA. For this project, the timeline was short. Our aim was to help inform the zoning blueprint, which had been drafted, was in the process of being reviewed with the community in a series of meetings organized by the Department of Planning and Community Development, and was slated to begin the formal review process with presentation to Neighborhood Planning Units two to three months into the future. In addition, resources were limited: there were no external funds to support the HIA. For these reasons, a participatory rapid-appraisal HIA approach was chosen.

This approach follows all of the customary steps of HIA shown above, but expedites the appraisal (assessment) phase. What distinguishes rapid from comprehensive appraisal is that time and resource constraints limit or preclude the collection of new data. Instead, relevant evidence was culled from scientific literature, previously-reported HIAs and sometimes other grey literature such as unpublished technical reports, working papers, and white papers from government agencies or scientific research groups. Local baseline data on the affected community was also reviewed, where available. The participatory approach was important to us to engage as many of the stakeholders involved as possible. Some strengths, criticisms and benefits of participatory rapid appraisal are shown in Figure 3.

STAKEHOLDER ENGAGEMENT

Several stakeholders were identified and engaged throughout the HIA steps. The GHPC built upon and strengthened existing relationships with three stakeholder groups: McPherson Local Redevelopment Authority (LRA), McPherson Action Community Coalition (MACC), and the City of Atlanta Department of Planning and Community Development. Each stakeholder group provided input throughout the screening, scoping and assessment phases of the HIA.

SCREENING

Screening answered the questions: Is there a decision to be investigated that has relevance for health? Is timing such that any conclusions and recommendations from an HIA can feasibly be incorporated into decision-making? Are stakeholders aware of and willing to participate in and consider the results of an HIA? Do practitioners have the knowledge and resources to conduct an HIA?

Initial exploration of the base closure and redevelopment process revealed that there are a limited number of decision points that can be assessed for health impact. These include design guidelines, zoning stipulations and developer's agreements (see Figure 4).

The zoning blueprint was the active decision point ahead at the time the current HIA was being considered. Discussions with neighborhood residents about issues of interest and concern, along with initial knowledge of proposed zoning elements, confirmed that some zoning decisions would have relevance to the health of on-site and surrounding communities. City planners, the LRA, and neighborhood leaders indicated their interest in participating in and considering the results of an HIA. Thus it was decided that a participatory, rapid appraisal HIA would be appropriate and feasible.

In addition to GHPC's extensive experience in facilitating diverse stakeholder engagement and qualitative and quantitative research, the project team received HIA training and technical assistance from the Centers for Disease Control and Prevention (CDC) and read widely in the HIA literature to prepare for conducting its first HIA.

Figure 3. Attributes of Participatory Rapid Appraisal

Strengths

- The structured participation of many stakeholders from different sectors and disciplines;
- The bringing together of different people who have a common interest, that is, in the development and implementation of a proposal;
- The rapid interrogation of the knowledge base and experience of people who live in and work for/with a community—known as tacit knowledge;
- The framing of recommendations to modify a proposal that reflects not only its multifaceted impacts but also the collaborative response of different stakeholders.

Criticisms

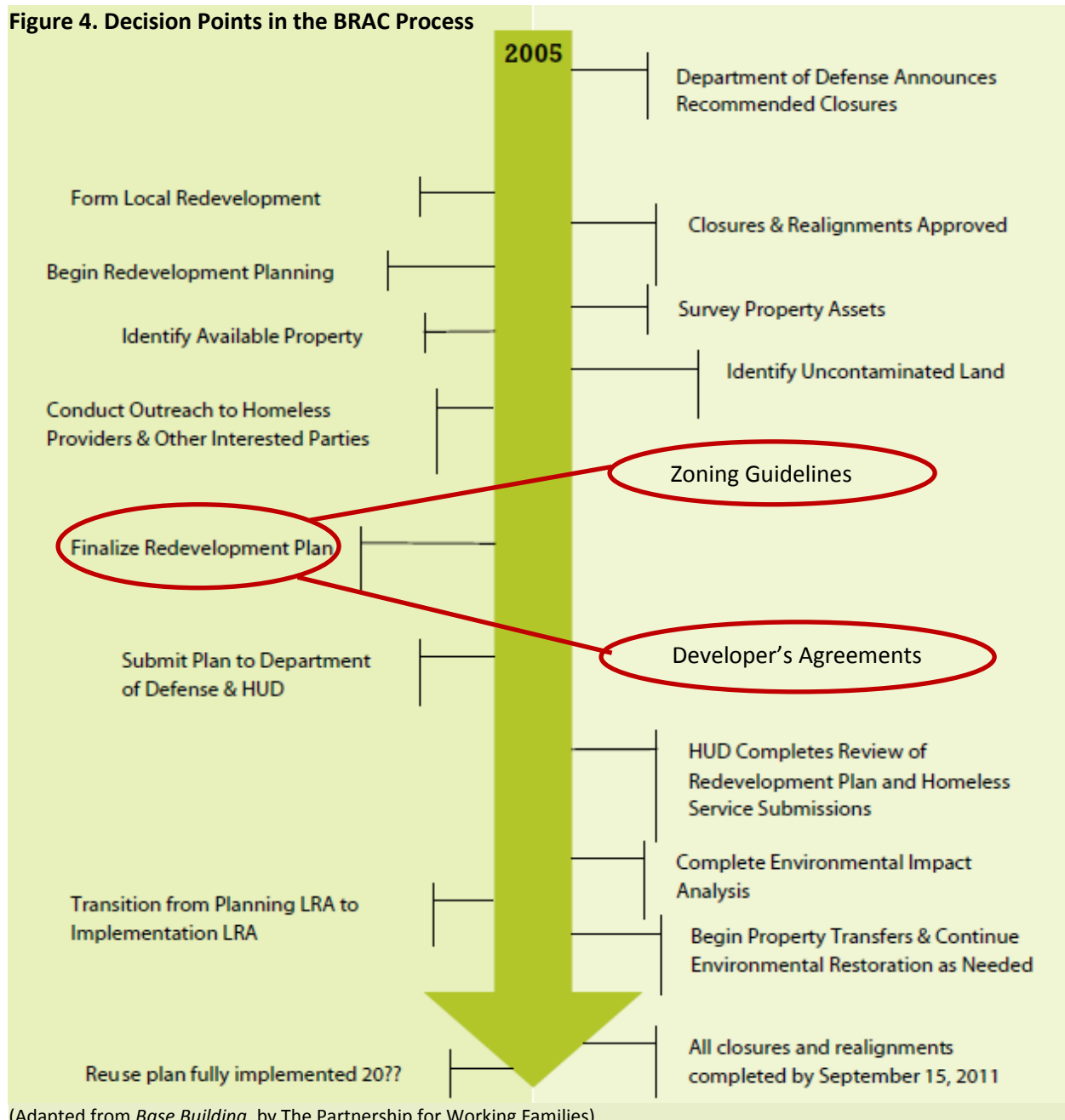
- Outputs may rely on opinion, or speculation, expressed by stakeholders at consultation events;
- In the generally short time available, it may not be possible to identify all stakeholders;
- Even if all relevant stakeholders can be identified, it may not be possible to find a suitable contact or representative in an organization, and their correct details, to invite them to the consultation events;
- Some stakeholders may choose not to participate for various reasons.

Benefits

- They increase understanding among stakeholders;
- Health is introduced as an important issue to be addressed by both health-related and non-health agencies;
- They improve partnership working in general, and on specific proposals.

Adapted from Ison E. "Rapid Appraisal Techniques" in [Health Impact Assessment: Concepts, Theory, Techniques, and Applications](#). Kemm J, Parry J, Palmer S. Eds. Oxford University Press (2004).

Figure 4. Decision Points in the BRAC Process



(Adapted from *Base Building*, by The Partnership for Working Families)

SCOPING

Scoping required identifying the topic of the assessment, as well as the geographic and time boundaries.

First, we selected the time horizon of the first five to ten years after property transfer, during which development will be phasing in. The rationale for this was that surrounding areas and populations stand to be particularly affected by new opportunities and by transitional activities during this time.

In geographic scope, we elected to consider impacts that might be felt most within roughly one-half mile of the Fort McPherson property. This encompasses parts of the neighborhoods of Fort Valley, Campbellton Road, Adams Park, Pomona Park, Venetian Hills and Sylvan Hills, all in the City of Atlanta; and the City of East Point which borders the base to the south. Amenities on the base, changes to travel patterns from opening of passage through the base, and disruptions caused by temporary loss of base occupancy, construction, etc., will likely affect residents within this range.

To focus the topic, we considered input from multiple sources and stakeholders. Sources included a report produced by students at Georgia Institute of Technology (Georgia Tech) in collaboration with the organization Georgia Stand-Up and McPherson-area residents; and a list of interest areas and recommendations developed by McPherson Action Community Coalition (MACC), an organization representing all of the neighborhoods surrounding the base.

GHPC team members were given windshield tours of the base property by the LRA director and of surrounding communities by members of MACC, and used photographs, field notes and observations from these tours as input. The team also attended LRA meetings and community zoning meetings organized by the City Department of Planning and Community Development, and had independent discussions with representatives of each of the stakeholder groups.

After reviewing data from all of these sources, we used an iterative process incorporating stakeholder input with in-house knowledge and HIA scoping criteria. Potential topics fell into five general interest areas: transportation, housing, commercial use, social/environmental, and open space. High-level logic models were created to describe possible pathways from zoning components in these areas, through health determinants, to health outcomes (Figure 5).

We then facilitated a process for members of the MACC group to prioritize these areas. In addition, we internally rated the areas on the following criteria:

- relevance to zoning;
- likelihood of effects during the first 5 to 10 years of redevelopment;
- likelihood and significance of health effects;
- measurability of impact; and
- availability of data on health impact.

The outcome of this scoping step was the following, narrowed research question for the rapid HIA:

What are the differential health effects of zoning provisions on the adjacent populations' healthy nutrition, physical activity, alcohol and tobacco use, and social cohesion during the phase-in period?

Figure 5. Logic Model for Interim Use Impacts of Zoning Components

	Zoning Component	Impact on Health Determinants	Impact on Health
TRANSPORTATION	Permitted use or development of transportation during phase-in: <ul style="list-style-type: none"> ○ Sidewalks ○ Connectivity of roads, trails, paths 	Physical activity through active forms of transport (e.g., walking, biking, transit use) Access to healthy foods (e.g., gardens, groceries)	Cardiovascular disease Diabetes Obesity Cancer
COMMERCIAL USE	Permitted use of commercial buildings during phase-in as it relates to: Availability to fresh produce markets: <ul style="list-style-type: none"> ○ Produce carts/trucks ○ Farmers' markets Restrictions on specific establishments and retail: <ul style="list-style-type: none"> ○ Convenience stores ○ Liquor stores ○ Fast food Affordable community meeting space	Access to healthy foods and nutritious diet Limited access to liquor, tobacco, and fast food Access to opportunities to build social cohesion	Cardiovascular disease Diabetes Obesity Cancer Mental health Crime
OPEN SPACE	Permitted use or development of open space during phase-in: <ul style="list-style-type: none"> ○ Golf course ○ Green space ○ Urban gardens ○ Dog parks ○ Walking trails ○ Trees ○ Active and passive recreational areas 	Opportunities for physical activity Consumption of locally grown produce Access to green/natural spaces	Cardiovascular disease Diabetes Obesity Cancer Mental health

ASSESSMENT

The HIA team did not have access to the actual zoning blueprint, as it was undergoing ongoing revisions by the City of Atlanta Department of Planning and Community Development at the same time as the HIA. Thus, data regarding the zoning plan were obtained through a series of community meetings conducted by the Planning Department. Each meeting described a section of the zoning plan and provided questionnaires for community feedback.

Evidence-gathering for the assessment phase of the rapid HIA included consulting reputable online sources such as the World Health Organization, the Centers for Disease Control and Prevention, and

federal and state data sets; studying previous Health Impact Assessments on relevant topics; a limited search of primary, peer-reviewed literature; and use of internal data and expertise. From these, potential health impacts of presumed zoning specifications were identified.

Based on this data, health impacts were determined according to the following criteria as defined in the HIA literature:

- **Speculative** = may or may not happen; no direct evidence to support;
- **Possible** = more likely to happen than not; direct evidence but from limited sources;
- **Probable** = very likely to happen; direct strong evidence from a range of data sources collected using different methods; or
- **Definite** = will happen; overwhelming, strong evidence from a range of data sources collected using different methods.

REPORTING

Following the assessment phase, recommendations were drafted and shared with the stakeholder groups— MACC, the LRA, and the City of Atlanta Department of Planning and Community Development. Reactions and input from each stakeholder group were taken into consideration in finalizing the recommendations. Some feedback fell outside of the general scoping criteria for this HIA (applicable in the five- to ten-year interim use period; relevant to zoning decisions; potential for significant impact on health; availability of data; or measurable). Any feedback that was not relevant to the HIA has been included under Additional Recommendations for future consideration.

A revised summary document containing final HIA recommendations was disseminated to the HIA stakeholders. This final report will also be provided to stakeholders. Additional dissemination of the final recommendations and/or report includes, but is not limited to: web posting, potential conference presentations and journal articles.

MONITORING and EVALUATION

One goal of HIA is to provide information to improve the health impact of policy/project decisions. Thus a question to ask in evaluating the impact of this HIA is: “To what degree were the results embraced and formalized by decision-makers?”

The constraints of a rapid HIA timeline limit the ability of GHPC to monitor long-term impacts; however, all interested stakeholders can utilize the findings and monitor progress.

In addition to health impacts, the process of conducting an HIA also has the potential to enrich and improve the decision-making process by encouraging collaboration, informing potential health impact decisions, and empowering engaged parties with tools for future use. Based on these parameters, another valuable way to assess this HIA is to ask the following questions:

- To what extent did the HIA engage all of the appropriate voices?
- Were there stakeholders that did not participate in the process?
- To what degree was the process useful for the community?
- To what degree were the results embraced and formalized by decision-makers?

FINDINGS and RECOMMENDATIONS

General impacts on surrounding populations

For many generations, the Fort McPherson property has had significant impacts on the surrounding communities. Converting the property to civilian use and integrating multiple new land uses into the area will create a new spectrum of impacts, which could be positive or negative, on surrounding communities.

Future occupants of the Fort McPherson property and residents of surrounding communities may have access to the health-promoting green space, recreational opportunities, services and commercial offerings that are envisioned in the redevelopment plan. Neighborhoods surrounding the base lack many of these amenities, and thus stand to gain important access to health-promoting resources through the conversion. Particularly during interim use, when on-site occupancy is low while surrounding neighborhoods are populated, **it can be speculated that the primary impacts of redevelopment will accrue to those who live in areas surrounding the base.**

Recommendation 1: Include a statement of overall intent to maximize benefits and minimize or mitigate harms to the health of surrounding populations, to the extent feasible.

Improving access to fresh food: community gardens

The proposed zoning blueprint permits up to four half-acre community gardens (i.e. no more than 2 total acres) in the Green Space District (E-II) of the Ft. McPherson redevelopment. **It is possible that providing space for community gardens will lead to multiple health benefits.** The benefits of community gardens are not well established in the research literature; however, a small number of studies have documented evidence that suggests garden participants have higher levels of fruit and vegetable intake, increased willingness to try new produce types, enhanced social cohesion, and improved overall sense of well-being. Zoning can help create a built environment that supports the actualization of these benefits. A number of subpopulations, for example, can be considered when locating the gardens:

- Students attending the proposed (charter) school
- Seniors
- Residents of the redevelopment and existing neighborhoods that surround the base
- Employees of the research park and main street businesses

Research suggests that, on average, individuals will walk no more than a quarter mile to access fresh foods. Properties within a range of 1,000 feet of a community garden increase in value. Thus, placement of the community gardens may have a profound impact on facilitating benefits as well as optimizing utilization and maintenance. Community gardens can be strategically located in spaces where subpopulations have convenient access and attaining optimal property value is critical for the redevelopment to thrive.

Recommendation 2: Permit community gardens in green space and areas within ¼ mile of schools, senior housing, MARTA stations, and adjacent neighborhoods to the north, west and south.

Several of the identified subareas are in medium to higher density areas and will likely have limited green space. These subareas, however, may be able to support community gardens on a smaller scale (e.g. 1/8 acre or less) or edible landscaping may be a permitted use option for “pocket parks” and rooftops. Permitting garden use in multiple areas of the property can help extend the green space into higher density areas and may be used as a key design feature to unite the redevelopment.

Improving access to fresh food: urban agriculture

The proposed zoning blueprint does not identify areas for urban farming. **It is possible that urban farming may have positive health impacts.** The transformation of urban environments from only consumers of food to generators of agricultural products contributes to sustainability, improved health, and poverty reduction. Large tracts of land are not required for urban farms to succeed. The US Census of Agriculture reports that in 2007, Georgia’s smallest farm category (one to nine acres) comprised over 1,000 farms harvesting an average of 3.1 acres each. Fulton County’s 15 small farms averaged 2.3 acres each. Using intensive practices, small, urban farms typically produce yields 13 times those of rural farms.

Several governmental and nongovernmental funding programs are available to support small, urban farms. The USDA offers farm ownership, operating and emergency loan programs targeted to beginning and minority farmers, and to youth for income-generating agricultural projects. The agency’s Cooperative State Research, Education, and Extension Service operates a Community Food Projects competitive grants program to help meet the food needs of low-income people, increase community self-reliance and promote comprehensive responses to local food, farm and nutrition issues. The nonprofit Georgia Organics has a farmer mentoring program and recently launched its first Urban Agriculture Training Program to encourage and teach more Georgians to farm in urban environments.

Recommendation 3: Permit small-scale (e.g., 1-acre tracts) farming in the same areas as the community gardens.

Improving access to fresh food: farmer’s markets

Evidence indicates that persons who have better access to fresh produce and other healthy foods both consume more of those foods and have lower risk for diet-related chronic diseases. A large, multi-state study, for example, found that each additional supermarket in a census tract correlated to 32 percent greater consumption of produce by African Americans and 11 percent more for whites. Other research has demonstrated lower rates of obesity and overweight among adults, teens and children whose neighborhood contains a supermarket, as well as better maternal diets and healthier babies. The benefits to health also are apparent when comparing populations without access to supermarkets (highest obesity and overweight) to those with access to supermarkets or grocery stores (least obesity and overweight).

As mentioned previously, individuals typically will not walk more than one-fourth mile to access fresh foods. Given the distance from fresh food outlets – over one mile from the border of Fort McPherson to

Save-A-Lot Grocery and Wayfield Foods; over 2 ½ miles from Kroger and 1½ miles from Life’s Essentials Health Food Store – **it is probable that new outlets for quality, affordable, healthy foods on the base property near surrounding residents will increase those residents’ consumption of healthy foods and provide probable positive consequences for their health.**

As revised with community input, the zoning blueprint proposes to allow food sales for off-premises consumption in the areas shown in Table 1. While zoning allows grocery stores in designated areas, it has taken up to ten years in some communities to realize the establishment of a full-service grocery store. Therefore, additional sources of fresh foods may be warranted.

Table 1. Allowed food sale locations

	B-I Main Street	C-I Employ- ment Center	C-II Employ- ment Center	D-IV Neighbor- hood Com- mercial	E-III Event Space
Convenience stores	?	?	?		
Grocery, gourmet or food stores	?			?	
Farmers’ markets	?				?

A produce stand (single seller) or farmers’ market (multiple sellers) can be defined as:

A commercial use with an organized display, indoors or outdoors, of agricultural products, in their natural state, for retail sale. Such agricultural products shall comprise at least 75% of the retail space available. Other products such as processed food (dried fruit, cheese or bread, for example), or artisan handiwork or art, may comprise up to twenty-five percent (25%) of the retail or display space available.

This definition is consistent with the definition of “food sales establishment” in the Georgia Food Act.

Beyond diet-influenced health impacts, there is evidence that new or revitalized fresh food markets in underserved neighborhoods can create jobs, improve the local economy and revitalize neighborhoods. Farmer’s markets support local and regional producers and, of grocery outlets, provide the widest selection of foods in season. They also increase food safety by improving traceability. Atlanta has four to five times fewer farmers’ markets than other cities of comparable size.

Recommendation 4: Permit farm stands and farmer’s markets in green space and other areas within ¼ mile of MARTA stations and adjacent neighborhoods to the north, west and south, including the Historic District.

One option for the location of a farmers’ market would be on any property that remains under federal operation. A booklet available from the US Department of Agriculture (USDA) provides guidance for establishing farmer’s markets on federal properties, citing numerous benefits that can make this a win-win collaboration. USDA itself has run a farmer’s market at its headquarters location since 1996, and many other markets operate on other federal properties across the US. The website provides a wealth of other resources on farmer’s markets and local food marketing, as well as grants, technical assistance and other programs to support farmer’s markets.

Community meeting space

The zoning plan provides that clubs or lodges, sponsored by a civic or similar organization, are proposed uses by special permit in C-1 and C-2 (Employment Center). There are also existing structures which may be vacant until later stages of development. **It is possible that enabling community groups to utilize existing structures will contribute to community building, social cohesion and decreased social isolation among residents.**

Community cohesion is an important element to quality of life and health. Research has shown that community cohesion and connectedness to neighbors contributes to health and overall feelings of well-being. There is evidence in the medical literature that isolation contributes to negative health by way of increasing levels of stress, weakening immune systems, and increasing depression.

Recommendation 5: Permit use of selected, accessible existing buildings for community meetings, education and children's programs.

Green space connectivity and accessibility

The zoning blueprint provides for 150 acres of green space, which will include trails and will provide a venue for exercise and physical activity. **It is probable that the green space, including trails, will have a positive impact on health. However, in order for this positive impact to occur, the green space and trails need to be accessible to the various populations.**

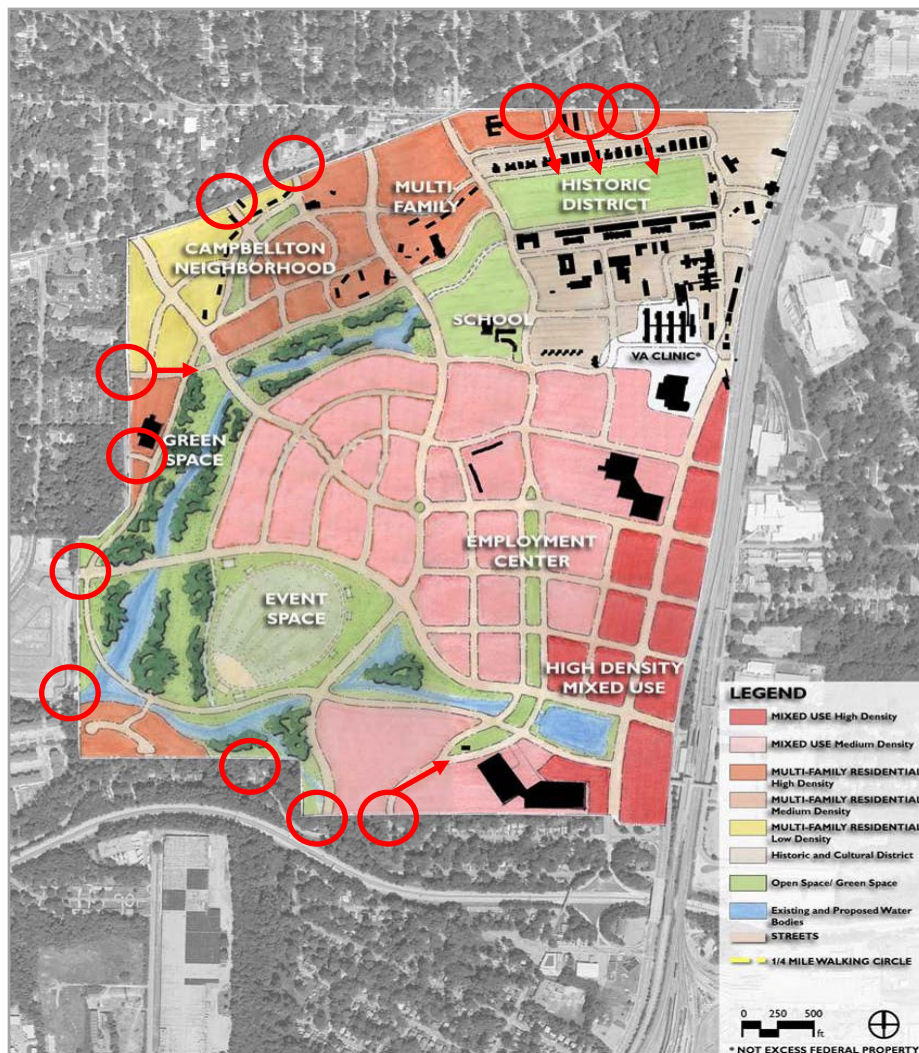
Regular physical activity has multiple positive health effects: it can help prevent or manage high blood pressure by boosting high-density lipoprotein (HDL), or "good," cholesterol while decreasing triglycerides. This keeps blood flowing smoothly by lowering the buildup of plaques in your arteries. Regular physical activity can also help prevent type 2 diabetes, osteoporosis and certain types of cancer. Access to green space has demonstrated mental health benefits. Exposure to nature can decrease depression and anxiety, and increase efficacy and the feeling of overall well-being. Access to green space may be especially beneficial for groups that are most likely not to exercise – women and people of limited income.

Table 2. Predicted health impacts of connectivity by subpopulation group

Subpopulation	Predicted health impacts	Likelihood
Elderly	Increased social capital and decreased social isolation	Speculative
Disabled	Increased efficacy, increased social integration	Probable
Surrounding communities	Increased physical exercise, which has numerous health benefits and a small number of health risks	Probable

In order for the benefit of the green space to be realized by a broad spectrum of the community, there need to be multiple access points and special attention should be paid to the accessibility for sub-populations, such as the elderly and persons with disabilities. Efforts should be made to ensure that access points to the trails and green space are wheelchair accessible and that any development conforms to the recommendations of the Americans with Disabilities Act. Figure 6 illustrates the recommended locations of access points.

Figure 6. Major points of access from adjacent neighborhoods



Recommendation 6: Permit use of existing outdoor recreational facilities and green space until redeveloped; maximize accessibility with ADA-compliant roads or paths at multiple border entry points.

Commercial use: fast food restaurants²

Currently, there is no restriction on the development fast food restaurants where food establishments are permitted in the five zoning districts. **It is probable that fast food restaurants in the development**

² Researchers define fast-food restaurants as chain restaurants that have two or more of the following characteristics: expedited food service, takeout business, limited or no wait staff, and payment tendered prior to receiving food.

will have a negative impact on the population's health. Fast foods tend to be high in fat and low in nutrition and there is evidence that fast food consumption contributes to the obesity epidemic. The scientific literature suggests three main reasons why fast food likely contributes to obesity: large, inexpensive portion sizes, high energy density, and the frequency with which Americans, including children, consume it.

Consumers' ease of access to fast food is a priority for the industry, as it has long been aware of the potential to maximize sales by selecting restaurant sites that ensure close proximity to the consumer base.

It is probable that the number of fast food restaurants in the development will have a disproportionate impact on children and individuals of lower income. The fast-food industry markets heavily to children and adolescents, who make up an important part of the industry's consumer base, and that marketing results in negative health eating behaviors for children. In a study of U.S. children and adolescents aged 4-19, those who ate fast food consumed more total energy, more total fat, more saturated fat, more total carbohydrates, more added sugars, more sugar sweetened drinks, less fluid milk, less fiber, fewer fruits, and fewer non-starchy vegetables compared to those who did not consume fast food. There is also evidence of a disproportionate racial/ethnic impact: research has shown that neighborhoods with 80% black residents had 2.4 fast food restaurants per square mile compared to 1.5 restaurants per square mile in neighborhoods with 20% black residents

By limiting the prevalence of fast food outlets and encouraging the development of healthier affordable alternatives, the zoning blueprint could limit people's access to unhealthy foods and impact health in a positive manner.

Recommendation 7: Limit fast food restaurants and prohibit their development near areas in which children congregate.

Commercial use: tobacco

A growing number of cities, states and countries have enacted laws that require all workplaces and public places to be smoke-free. Neither Georgia nor the city of Atlanta has enacted these laws. The evidence of health benefits of smoke free environments is strong **and it is definite that placing limitations on tobacco use in the appropriate districts would have a positive health impact.**

The scientific evidence is unequivocal that secondhand smoke is a cause of serious disease and premature death. After smoke-free policies were enacted in other states, local business leaders feared profits would be negatively impacted; research has shown that in some cases, there was an initial dip in profits immediately after a ban on smoking was enacted; however, the effect was short lasting and profits resumed their levels prior to the ban rather rapidly. In some cases, businesses reported increased profits following the enactment of a ban on smoking in the establishment.

Recommendation 8: Prohibit bars and restaurants that do not support the state tobacco policy. Designate public spaces where children congregate as smoke-free.

Advertising: tobacco

It is probable that prohibiting billboard and store-front advertising (including advertising for tobacco) will result in lower levels of tobacco consumption. Published research studies have found that kids are twice as sensitive to tobacco advertising than adults, they are more likely to be influenced to smoke by cigarette marketing than by peer pressure, and that one-third of underage experimentation with smoking is attributable to tobacco company advertising.

The federal legislation which gives FDA authority over tobacco (signed into law on June 22, 2009), creates a rule which prohibits outdoor cigarette or smokeless advertising within 1000 feet of schools, parks or playgrounds. This rule will be effective on June 20, 2010.

Recommendation 9: Enforce federal policy (effective 6/20/2010) prohibiting outdoor cigarette or smokeless tobacco advertising within 1,000 feet of schools, parks or playgrounds.

Advertising: alcohol

There is no reference to billboard or store window advertising in the proposed zoning blueprint. **It is probable that prohibiting billboard and store-front advertising (including advertising for alcohol) will result in a lower level of alcohol consumption, which will positively impact health.**

Public health research has shown that (1) billboard advertising for alcohol is associated with liquor outlet density; (2) alcohol ads are often densely distributed around schools and places where youth congregate; (3) frequency of receiving a message (whether positive or negative) is positively associated with health behaviors, including alcohol consumption. One study showed that exposure to advertisements was related to problem drinking, even after family history of alcohol problems and socioeconomic status were controlled.

Recommendation 10: Limit outdoor and store-front advertising.

Commercial use: alcohol

Although package stores are prohibited in areas of C-1 and C-2 of the Employment Center District, eating and drinking establishments (including bars) and establishments for the sale of convenience goods are proposed in these areas as well as in the commercial area of the Residential District and the Main Street District.

Research has shown there is a connection between alcohol availability and alcohol-related health problems, such as liver cirrhosis, motor vehicle crashes, and violence. **Therefore, it is probable that limitations on venues in which alcohol can be purchased will have a positive impact on health.**

Recommendation 11: Reduce alcohol availability by restricting the density of establishments that serve or sell alcoholic beverages.

Table 3. Summary of Potential Health Impacts and Zoning Recommendations

Highlighted Findings	Zoning Recommendations	Nutrition	Physical Activity	Alcohol Use	Tobacco Use	Soc Connection
In the first 5-10 years, people in surrounding areas will be the ones most affected by changes on the base.	1) Include a statement of overall intent to maximize benefits and minimize or mitigate harms to the health of surrounding populations, to the extent feasible.	✓	✓	✓	✓	✓
Community gardens encourage people to eat more healthy foods and try new fruits and vegetables. They boost community bonds and individual sense of well-being; and they increase nearby home values. But ¼ mile is the furthest most people will walk for fresh food.	2) Permit community gardens in green space and areas within ¼ mile of schools, senior housing, MARTA stations, and adjacent neighborhoods to the north, west and south. 3) Permit small-scale (e.g., 1 acre tracts) farming in the same areas as the community gardens	✓	✓			✓
People eat healthy, fresh foods more when they have good access to farmer's markets. Farmer's markets can create jobs, improve the local economy, provide the best selection of in-season foods, increase food safety, and reduce fuel and pollution effects of transport.	4) Permit farm stands and farmer's markets in green space and other areas within ¼ mile of MARTA stations and adjacent neighborhoods to the north, west and south, including the Historic District.	✓				✓
Social connections contribute to health and well-being. Isolation increases stress, weakens immune systems and increases depression.	5) Permit use of selected, accessible existing buildings for community meetings, education and children's programs.					✓
People are more physically active when they have access to trails and parks. They are more likely to use trails when they can access them from multiple places. Walking trails may especially increase physical activity for groups that are most likely not to exercise – women and people of limited income.	6) Permit use of existing outdoor recreational facilities and green space until redeveloped; maximize accessibility with ADA-compliant roads or paths at multiple border entry points.	✓				✓
Fast food contributes to obesity of children and adults because of high calories, large, inexpensive portions, and frequent consumption.	7) Limit fast food restaurants and prohibit their development near areas in which children congregate.		✓			
Secondhand smoke contributes to cardiovascular disease, lung cancer, respiratory disease, disability and premature death.	8) Prohibit bars and restaurants that do not support the state tobacco policy. Designate public spaces where children congregate as smoke-free.			✓		
Tobacco advertising accounts for 1/3 of smoking experimentation in youth. Children are twice as susceptible to tobacco advertising as adults. It influences them more than peer pressure.	9) Enforce federal policy (effective 6/20/2010) prohibiting outdoor cigarette or smokeless tobacco advertising within 1,000 feet of schools, parks or playgrounds 10) Limit outdoor and store-front advertising.			✓	✓	
People who are exposed to more alcohol advertisements consume more alcohol. Neighborhoods with more alcohol billboards also often have more liquor stores. Alcohol ads are often densely located near schools and places where youth congregate.						
Alcohol-related health problems such as cirrhosis, car crashes and violence are related to availability of alcohol.	11) Reduce alcohol availability by restricting the density of establishments that serve or sell alcoholic beverages.			✓		

ADDITIONAL RECOMMENDATIONS

The scope of this HIA was the zoning blueprint and potential health impacts in a five- to ten-year interim period for the Fort McPherson redevelopment and surrounding communities within one-half mile of the property. Several recommendations were raised that were either beyond this scope or were not supported by scoping criteria (i.e., significant impact on health, availability of data, and measurability). While the following recommendations fall outside the purview of this HIA, they could be important to consider for other policy opportunities:

- Establish a police precinct or mini-precinct within the redevelopment.
- Provide an urgent care center to serve the general public.
- Allow free or low-cost community meeting space.
- Keep existing trees and greenery to the extent possible; when removed, install required replacements within the community.
- Allow surrounding communities to access existing outdoor recreation amenities (e.g., baseball field, tennis courts, golf course or portions thereof) as long as these remain.

Policy opportunities within which these recommendations could be considered reside with the City of Atlanta, McPherson LRA, and a Community Benefit Agreement.

SUMMARY AND CONCLUSION

Overall, this health impact assessment found that the redevelopment of Fort McPherson may result in a number of positive health impacts for the surrounding communities and, eventually, for the new residents. According to the proposed zoning blueprint, access to health-promoting green space, recreational opportunities, services and commercial offerings will improve. Due to the long time horizon for redevelopment, the impact of changes during the interim period (the first five to ten years after property transfer) will be experienced first by adjacent communities and temporary tenants. To promote positive health impacts during the interim, it is recommended that some features of the zoning blueprint be enhanced, including those relevant to access to fresh foods, commercial use, advertising, community meeting space, and connectivity to green spaces (see Table 3).

The zoning recommendations to improve access to fresh food are two-fold: limit the development of fast food restaurants; and allow land use for farmers' markets, community gardens and urban agriculture. Permitted commercial uses may have an impact on tobacco and alcohol consumption. While specific topics of advertising cannot be restricted through zoning, it is recommended that all billboards and outdoor and store-front advertisements be restricted. This would include advertisements for alcohol and tobacco products. In addition, it is recommended that bars and restaurants that do not support that state tobacco policy be prohibited, and that public areas near where children congregate (e.g., schools and playgrounds) be designated as smoke-free. Furthermore, communities adjacent to the redevelopment will be the largest population affected in the interim period. It is recommended that community meeting space be an allowable use of existing buildings to assist with integrating the new development with existing community members. In addition, to optimize the green space benefits, it is recommended that the zoning blueprint be designed for green space to be easily accessible by surrounding populations with multiple ADA compliant access points.

These recommendations were concluded from using a rapid approach to the HIA methodology. The rapid nature of the methodology resulted in a few limitations to consider. While several areas of literature were consulted—including obesity, nutrition, green space, community gardens and urban farming, transportation, accessibility and connectivity, advertising, health behaviors, among others—it was not feasible to conduct a comprehensive literature review on each topic. In some cases, the research team relied on existing reviews, data sources from other HIAs and internal expertise.

While the HIA incorporated input from many diverse stakeholders, only one primary contact represented the point of view of the Local Redevelopment Authority and members of a community action coalition were likely those most involved in their neighborhoods and may not fully represent the views of residents who are not as active. In a more comprehensive HIA, a longer timeline would allow for baseline and primary data collection and the application of engagement methods to recruit a wider representation of the stakeholders.

Another limitation was that the research team did not have access to the actual zoning blueprint proposal. The HIA analysis was based on presentations by the City of Atlanta Department of Planning and Community Development at community zoning meetings and on independent discussions with city planners and the LRA. This limitation, however, is common among HIAs. One often must balance the opportunity to contribute critical health information to a decision with having to conduct the assessment on a draft version of the policy or program being considered.

Despite these limitations, the HIA suggests that the zoning blueprint for the redevelopment could have an overall positive health impact during the 5-10 year interim period. Optimal health benefits will be determined not only by what is allowed, limited and restricted by future zoning, but also by the laws that govern the City of Atlanta and other relevant policies and programs that will affect the redevelopment. To ensure the health of those who will work, live, play and worship in the redevelopment and for those communities adjacent to the base, it will be critical to consider the health impacts of policy and program decisions that will be made throughout the entire redevelopment process.

REPORT AUTHOR

The Georgia Health Policy Center, established in 1995, provides evidence-based research, program development and policy guidance on local, state and national levels to improve the health of communities. Today GHPC is at work in more than 220 communities across all 50 states. A key role is bringing diverse stakeholders together to overcome “silos” and develop new collaborations to promote and improve health.

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